

Kelly Zhu

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EDUCATION

University of Toronto <i>MSc in Computer Science (Supervised by David Lindell)</i>	09/2024 – present Toronto, ON
University of Toronto <i>BASc in Engineering Science, Machine Intelligence (Supervised by Florian Shkurti)</i> <i>Minor in Robotics & Mechatronics</i>	09/2019 – 04/2024 Toronto, ON

AWARDS & HONOURS

Vector Scholarship in Artificial Intelligence, \$17.5K Vector Institute, <i>scholarship for MSc research</i>	2024
Queen Elizabeth II Graduate Scholarship in Science & Technology, \$15K Government of Ontario, <i>scholarship for MSc research</i>	2024
DAAD RISE Germany Scholar, \$6K German Academic Exchange Service, <i>scholarship for research abroad in Germany</i>	2023
Research Training Award, \$6K Mitacs, <i>funding for summer research internship</i>	2020
Engineering Science Research Opportunity Program (ESROP), \$6K Division of Engineering Science, <i>funding for summer research internship</i>	2020
University of Toronto Scholar, \$7.5K University of Toronto, <i>undergraduate entrance scholarship</i>	2019
Dean's Merit Award, \$2.5K Faculty of Applied Science & Engineering, <i>undergraduate entrance scholarship</i>	2019

PUBLICATIONS

- Yibo Liu, **Kelly Zhu**, Guile Wu, Yuan Ren, Bingbing Liu, Yang Liu, Jinjun Shan. "MV-DeepSDF: Implicit Modeling with Multi-Sweep Point Clouds for 3D Vehicle Reconstruction in Autonomous Driving." *ICCV*, 2023.

RESEARCH EXPERIENCE

Undergraduate Thesis <i>Robot Vision & Learning Lab (Supervised by Florian Shkurti)</i> <ul style="list-style-type: none">• Multi-agent trajectory prediction for sidewalk navigation in autonomous robots• Uncertainty calibration for perception-based motion planning in autonomous driving	09/2023 – 09/2024 University of Toronto
Visiting Research Student <i>safe.trAIIn by Siemens AG (Supervised by Alexander Braun)</i> <ul style="list-style-type: none">• Investigated the use of AI-based methods for safe and reliable autonomous train systems	06/2023 – 08/2023 Hochschule Düsseldorf
Summer Research Student <i>Space & Terrestrial Autonomous Robotics Systems Lab (Supervised by Jonathan Kelly)</i> <ul style="list-style-type: none">• Designed algorithms for energy-efficient stochastic path planning in planetary navigation	05/2021 – 09/2021 University of Toronto
Summer Research Student <i>Robotics & Automation Lab (Supervised by Andrew Goldenberg)</i> <ul style="list-style-type: none">• Prototyped an autonomous bed-making robot on a 6-DoF robot arm mounted on a mobile platform	05/2020 – 08/2020 University of Toronto

INDUSTRY EXPERIENCE

Perception Researcher

May 2022 – Apr. 2023

Huawei Noah's Ark Lab (Supervised by Bingbing Liu)

Markham, ON

- Research on LiDAR-based 3D scene and vehicle reconstruction for autonomous driving

Autonomy Engineering Intern

May 2021 – Sep. 2021

Trimble Applanix

Richmond Hill, ON

- Contributed towards a LiDAR-based SLAM and perception solution for autonomous navigation

TEACHING

CSC412 – Probabilistic Learning & Reasoning

Winter 2025

Teaching Assistant

University of Toronto

SKILLS & LANGUAGES

Programming Languages: Python, C/C++, MATLAB, Java

Libraries: PyTorch, TensorFlow, NumPy, SciPy, scikit-learn, pandas, Matplotlib, Open3D, OpenCV

Tools: Linux/Unix, ROS, Git, Docker, Kubernetes

Languages: English (native), Mandarin (fluent), French (fluent)